## REVISIONS TO CLAIMS

1. (currently amended) A low-pressure mercury vapor discharge lamp comprising a light-transmitting discharge vessel,

the discharge vessel enclosing. in a gastight manner, a discharge space provided with an inert gas mixture and with mercury,

a first portion of the discharge vessel being provided with a first electrode arranged in the discharge space and with a luminescent layer,

which first portion, in operation, radiates light in a first range of the electromagnetic spectrum from 100 to 1000 nm,

a second portion of the discharge vessel being provided with a second electrode arranged in the discharge space,

which second portion, in operation, radiates light in a second range of the electromagnetic spectrum from 100 to 1000nm, said second range being different from the first range,

wherein:

a) the low-pressure mercury vapor discharge lamp comprises

i. ~~current supply conductors for~~control means for ~~receiving~~ controlling level and relative contributions of light radiated from the first and second portions using a direct current, and

ii. an amalgam; and

b) ~~—~~the discharge space contains only two electrodes.

2. (cancelled)

## REVISIONS TO CLAIMS

3.(currently amended) The low-pressure mercury vapor discharge lamp as claimed in claim ~~2~~1, wherein the amalgam is provided in the region between the first and the second portion of the discharge vessel.

4. (currently amended) The low-pressure mercury vapor discharge lamp claimed in claim ~~2~~1, wherein the amalgam is provided in the region of the electrode of the portion of the discharge vessel with the lowest color temperature.

5. (currently amended) The low-pressure mercury vapor discharge lamp claimed in claim ~~2 or 4~~1, wherein the amalgam is provided in the region of the first electrode, and a further amalgam is provided in the region of the second electrode.

6. (currently amended) A low-pressure mercury vapor discharge lamp comprising a light-transmitting discharge vessel,

the discharge vessel enclosing, in a gastight manner, a discharge space provided with an inert gas mixture and with mercury,

a first portion of the discharge vessel being provided with a first electrode arranged in the discharge space and with a luminescent layer,

which first portion, in operation, radiates light in a first range of the electromagnetic spectrum from 100 to 1000 nm,

a second portion of the discharge vessel being provided with a second electrode arranged in the discharge space,

which second portion, in operation, radiates light in a second range of the electromagnetic

spectrum from 100 to 1000nm, said second range being different from the first range.

wherein the low-pressure mercury vapor discharge lamp comprises direct current control means for controlling level and relative contributions of light radiated from the first and second portions responsive to a direct current, and

~~The low-pressure mercury vapor discharge lamp claimed in claim 1, 2, 3 or 4~~, wherein a cold spot is provided in the discharge vessel, which operates to improve speed of achieving a desired color output of the lamp.

7. (previously presented) The low-pressure mercury vapor discharge lamp claimed in claim 6, wherein the cold spot is provided in the region between the first and the second portion of the discharge vessel.

8. (currently amended) ~~A~~ The low-pressure mercury vapor discharge lamp of claim 6, ~~claimed in claim 6 in combination with claim 2, 3 or 4 or as claimed in claim 7 in combination with claim 2, 3 or 4~~, wherein ~~the~~ an amalgam is provided in the region of the cold spot.

9. (currently amended) A low-pressure mercury vapor discharge lamp claimed in claim 1, ~~2,~~ 3 or 4, wherein a wall of the second portion of the discharge vessel is made from a glass which is transmissive to UV.

10. (currently amended) The low-pressure mercury vapor discharge lamp claimed in claim 1, ~~2,~~ 3 or 4, wherein, in operation, the luminescent layer yields a spectral characteristic stimulating melatonin built-up in a human subject or yields a spectral characteristic suppressing the

melatonin built-up or stimulating melatonin degradation in the human subject.

11. (currently amended) The low-pressure mercury vapor discharge lamp claimed in claim 1, ~~2,~~ 3 or 4, characterized in that the second portion of the discharge vessel is provided with a further luminescent layer.

12. (previously presented) The low-pressure mercury vapor discharge lamp claimed in claim 11, wherein, in operation, the further luminescent layer yields a spectral characteristic suppressing the melatonin built-up in a human subject or stimulating melatonin degradation or yields a spectral characteristic stimulating melatonin built-up in the human subject.

13. (currently amended) The low-pressure mercury vapor discharge lamp claimed in claim ~~10 and 12~~ 1 wherein, in operation the luminescent layer yields a spectral characteristic stimulating melatonin built-up in the human subject and ~~that~~ the second portion comprises a ~~the~~ further luminescent layer that yields a spectral characteristic suppressing the melatonin built-up or stimulating melatonin degradation in the human subject.

14. (withdrawn, currently amended)[1] The low-pressure mercury vapor discharge lamp claimed in claim 10, ~~12 or 13~~, characterized in that the spectral characteristic is specified by an output fraction of melatonin suppressive radiation $R_{sr}$ and light output $L_o$, the melatonin suppressive radiation being $R_{sr} \geq 0.45$ Melatonin Watt/Watt and the light output being $L_o \leq 60$ lumen/Watt.

15. (withdrawn, currently amended) The low-pressure mercury vapor discharge lamp claimed

in claim 10, ~~12 or 13,~~ wherein the spectral characteristic is specified by an output fraction of melatonin suppressive radiation $R_{sr}$ and light output $L_o$, the melatonin suppressive radiation being $R_{sr} \geq 0.6$ Melatonin Watt/Watt and the light output being $L_o \geq 100$ lumen/Watt, the discharge lamp having a color temperature of $\geq 6500$ K.

16. (withdrawn, currently amended) The low-pressure mercury vapor discharge lamp claimed in claim 10, ~~12 or 13,~~ wherein the spectral characteristic is specified by an output fraction of melatonin suppressive radiation $R_{sr}$ and light output $L_o$, the melatonin suppressive radiation being $R_{sr} \leq 0.2$ Melatonin Watt/Watt and the light output being $L_o \geq 100$ lumen/Watt.

17. (previously presented) The low-pressure mercury vapor discharge lamp claimed in claim 11, wherein the luminescent layer of the first portion comprises a luminescent material emitting UV-A radiation, and in that the further luminescent layer of the second portion comprises a luminescent material emitting UV-B radiation or emitting UV-A and UV-B radiation.

18. (currently amended) The low-pressure mercury vapor discharge lamp claimed in claim 1, ~~2,~~ 3 or 4, wherein the low-pressure mercury vapor discharge lamp is adapted to receive an alternating current.

19. (currently amended)[ii] ~~The low-pressure mercury vapor discharge lamp claimed in claim 1, 2, 3 or 4~~ A low-pressure mercury vapor discharge lamp comprising a light-transmitting discharge vessel,

the discharge vessel enclosing, in a gastight manner, a discharge space provided with an inert

gas mixture and with mercury,

a first portion of the discharge vessel being provided with a first electrode arranged in the discharge space and with a luminescent layer,

which first portion, in operation, radiates light in a first range of the electromagnetic spectrum from 100 to 1000 nm,

a second portion of the discharge vessel being provided with a second electrode arranged in the discharge space,

which second portion, in operation, radiates light in a second range of the electromagnetic spectrum from 100 to 1000nm, said second range being different from the first range,

wherein:

the low-pressure mercury vapor discharge lamp comprises current supply conductors for receiving a direct current, and

the discharge space contains only two electrodes, and

wherein

the discharge lamp comprises an at least partly substantially cylindrical discharge vessel with a length $L_{dv}$ and with an internal diameter $D_{in}$, and

the ratio of the weight of mercury $m_{Hg}$ in the discharge vessel and the product of the internal diameter $D_{in}$ and the length of the discharge vessel $L_{dv}$ is given by the relation:

$$\frac{m_{Hg}}{D_{in} \times L_{dv}} = C,$$

wherein $C \leq 0.01$ $\mu g/mm^2$.

20. (previously presented)The low-pressure mercury vapor discharge lamp claimed in claim 19,

wherein $0.0005 \leq C \leq 0.005$ μg/mm$^2$.

21. (withdrawn, currently amended) The low-pressure mercury vapor discharge lamp claimed in claim 1, ~~2,~~ 3 or 4 wherein

the discharge lamp comprises an at least partly substantially cylindrical discharge vessel with a length $L_{dv}$ and with an internal diameter $D_{in}$, and

the product of the mercury pressure $p_{Hg}$ and the internal diameter $D_{in}$ of the discharge vessel is in the range $0.13 \leq p_{Hg} \times D_{in} \leq 8$ Pa.cm.

22. (previously presented, withdrawn) The low-pressure mercury vapor discharge lamp claimed in claim 21, wherein the product of the mercury pressure $p_{Hg}$ and the internal diameter $D_{in}$ of the discharge vessel is in the range $0.13 \leq p_{Hg} \times D_{in} \leq 4$ Pa.cm.

23. (currently amended) The low-pressure mercury vapor discharge lamp as claimed in claim 1, ~~2,~~ 3 or 4, wherein the discharge vessel (1) contains less than 0.2 mg mercury.

24. (currently amended) The compact fluorescent lamp comprising a low-pressure mercury-vapor discharge lamp claimed in claim 1, ~~2,~~ 3 or 4, wherein a lamp housing is attached to the discharge vessel of the low-pressure mercury-vapor discharge lamp, which lamp housing is provided with a lamp cap.

25. (previously presented) The compact fluorescent lamp claimed in claim 24, wherein the discharge vessel of the low-pressure mercury-vapor discharge lamp is surrounded by a diffusely

scattering light-transmitting envelope which is attached to the lamp housing.

26. (new) A low-pressure mercury vapor lamp comprising:

- a discharge vessel including;
  - a first cylindrical end surrounding a first electrode and including a first luminescent layer, the first luminescent layer being suitable for radiating in a first range of the electromagnetic spectrum from 100 to 1000 nm;
  - a second cylindrical end surrounding a second electrode and including a second luminescent layer, the second luminescent layer being suitable for radiating in a second range of the electromagnetic spectrum from 100 to 1000 nm, the second range being different from the first range;
  - no additional electrodes; and
  - an amalgam arranged between the first and second cylindrical ends and away from the electrodes; and
- direct current supply means for controlling level and relative contributions of the first and second luminescent layers to a spectral output of the lamp.